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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,529	01/11/2001	Toshihiro Mori	018775-814	8100

7590

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EXAMINER

DASTOURI, MEHRDAD

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,529

Applicant(s)

MORI, TOSHIHIRO

Examiner

Mehrdad Dastouri

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi et al (U.S. 5,390,003).

Regarding Claim 1, Yamaguchi et al disclose a specified pattern detection apparatus comprising:

a first filter which detects a partial image included in a specified pattern in input image data (Figure 7, Steps 103 and 105, preliminary scanning; Figure 10; Column 9, Lines 62-67, Column 10, Lines 1-4; Column 11, Lines 53-62. In pattern recognition the circular pattern depicted in Figure 10 will be convolved with the bill image to verify existence of the pattern in the input image data (first filtering process).);

a memory device which stores bi-level data on the existence of the partial image based on output signals of said first filter (Column 12, Lines 3-23); and

a detector which detects the specified pattern from the bi-level data stored in said memory device (Figure 10; Column 12, Lines 24-50).

Regarding Claim 2, Yamaguchi et al further disclose the specified pattern detection apparatus according to Claim 1, wherein said detector comprises a plurality of second filters and detects the specified pattern based on signals outputted by said second filters (Figure 10, pattern matching in main scanning; Column 12, Lines 24-50).

As depicted in Figure 10 the reference patterns for main decision will be convolved with the bit map image in bit map memory to verify existence of the pattern in the input image data (second filtering process.).

Regarding Claim 3, Yamaguchi et al further disclose the specified pattern detection apparatus according to Claim 2, wherein said second filters detect a pattern obtained by rotation of the specified pattern (Figure 10, pattern matching in main scanning; Column 12, Lines 24-50).

Regarding Claim 4, Yamaguchi et al further disclose the specified pattern detection apparatus according to Claim 2, wherein said second filters detect a plurality of types of the specified patterns (Figure 10, pattern matching in main scanning; Column 12, Lines 24-50).

Regarding Claim 5, Yamaguchi et al further disclose the specified pattern detection apparatus according to Claim 1, further comprising a binarizer which binarizes the input image data to output bi-level image data, wherein said first filter detects the partial image in the bi-level image data (Column 11, Lines 43-52).

Regarding Claim 13, Yamaguchi et al further disclose the specified pattern detection apparatus according to Claim 1, further comprising a binarizer which binarizes the input image data to outputs bi-level image data (Column 12, Lines 3-23).

With regards to Claim 14, arguments analogous to those presented for Claim 1 are applicable to Claim 14.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 8-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (U.S. 5,390,003) in view of Hirabayashi et al (U.S. 5,309,524).

Yamaguchi et al do not disclose further limitations of Claim 6.

Hirabayashi et al disclose an image reducing apparatus for obtaining a reduced image in the process of detecting special patterns comprising a resolution converter which converts the bi-level data of the special pattern image to bi-level data of a lower resolution (Figure 14; Column 8, Lines 55-64).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Yamaguchi et al invention according to the teachings of Hirabayashi et al to convert the bi-level data on the existence of the partial image to bi-level data of a lower resolution before storing the bi-level data on the existence of the partial image to said memory device because it will reduce the amount of the data to be processed and will expedite pattern detection.

With regards to Claim 8, arguments analogous to those presented for Claims 1 and 6 are applicable to Claim 8.

With regards to Claim 9, arguments analogous to those presented for Claim 2 are applicable to Claim 9.

With regards to Claim 10, arguments analogous to those presented for Claim 3 are applicable to Claim 10.

With regards to Claim 11, arguments analogous to those presented for Claim 1 are applicable to Claim 11.

With regards to Claim 15, arguments analogous to those presented for Claim 8 are applicable to Claim 15.

5. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (U.S. 5,390,003) in view of Ikenoue et al (U.S. 5,671,277).

Yamaguchi et al do not disclose further limitations of Claim 7.

Ikenoue et al disclose an image forming apparatus and copy management system comprising a map generator which converts the bi-level data to multi-level data according to distance from the position of the partial image and generates a map data of the multi-level data (Figures 4, 7, 8(a)-8(d), 26 and 32; Column 8, Lines 1-28; Column 13, Lines 24-49; Column 17, Lines 6-21).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Yamaguchi et al invention according to the teachings of Ikenoue et al to convert the bi-level data to multi-level data according to distance from the position of the partial image and generate a map data of the multi-level data because it will discriminate the pattern from the image data and will facilitate pattern detection.

With regards to Claim 12, arguments analogous to those presented for Claim 7 are applicable to Claim 12.

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,153,444 to Maeda et al is cited for method and apparatus for detecting patterns.

U.S. Patent 6,292,583 to Maruo is cited for image information processing apparatus.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Customer Service Office whose telephone number is (703) 306-0377.

MEHRDAD DASTOURI
PRIMARY EXAMINER


Mehrdad Dastouri
Primary Examiner
Group Art Unit 2623
October 17, 2003